

IN THE CLAIMS

Please **CANCEL** claims 1-12.

Please **ADD** new claims 13-24 as follows:

13. (New) A proximity detector for use in a mobile telephone having at least a microphone and a loudspeaker operatively connected to signal processing means, the proximity detector comprising:

data processing and control means including means for controlling the signal processing means for activating the loudspeaker to reproduce an acoustic control signal;

correlating means for correlating a control signal received directly by the microphone and a control signal reflected from a user of the telephone and then received by the microphone for determining a distance between the telephone and the user; and

signal level control means for controlling the signal processing means for varying the signal level of an audible signal reproduced by the loudspeaker proportionally to the determined distance.

14. (New) The proximity detector according to claim 13, wherein the data processing and control means include:

attenuation determining means for determining the attenuation of the control signal received directly by the microphone; and

means for varying the signal level of an audible signal reproduced by the loudspeaker inversely proportionally to the attenuation.

15. (New) The proximity detector according to claim 13, wherein the correlating means include means for comparing the signal level of the directly received control signal with the signal level of the reflected control signal for determining the distance between the telephone and the user.

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16. (New) The proximity detector according to claim 13, wherein the correlating means include means for comparing a signal delay of the directly received control signal with a signal delay of the reflected control signal for determining the distance between the telephone and the user.

17. (New) The proximity detector according to claim 13, wherein the control signal is an ultrasonic signal.

18. (New) The proximity detector according to claim 13, wherein the control signal is an audible signal.

19. (New) The proximity detector according to claim 13, wherein the control signal is a ring or a voice signal.

20. (New) A proximity detector for use in a mobile telephone having at least a microphone and a loudspeaker operatively connected to signal processing means, the proximity detector comprising:

data processing and control means including means for controlling the signal processing means for activating the loudspeaker to reproduce an acoustic control signal;

attenuation determining means for determining the attenuation of a control signal received directly by the microphone; and

means for varying the signal level of an audible signal reproduced by the loudspeaker inversely proportionally to the attenuation,

21. (New) A mobile telephone apparatus, comprising:

a microphone;

a loudspeaker;

signal processing means operatively coupled to the loudspeaker; and

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a proximity detector including

data processing and control means including means for controlling the signal processing means for activating the loudspeaker to reproduce an acoustic control signal;

correlating means for correlating a control signal received directly by the microphone and the control signal reflected from a user of the telephone and then received by the microphone for determining a distance between the telephone and the user; and

signal level control means for controlling the signal processing means for varying the signal level of an audible signal reproduced by the loudspeaker proportionally to the determined distance.

22. (New) A method for sound-based proximity detection in a mobile telephone having at least a microphone and a loudspeaker operatively connected to signal processing means, the method comprising the steps of:

controlling the signal-processing means to activate the loudspeaker to reproduce an acoustic control signal;

receiving first and second control signals from the microphone corresponding to an acoustic control signal received directly from the loudspeaker and an acoustic control signal reflected from a user of the telephone and then received, respectively;

correlating the first and second control signals to determine the distance between the telephone and the user; and

generating a data control signal for the signal processing means to activate the loudspeaker for reproducing audible signals having a signal level that is proportional to the determined distance between the telephone and the user.

23. (New) The method according to claim 22, further comprising the steps of:

determining the attenuation of the control signal received directly from the

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loudspeaker; and

varying the signal level of an audible signal reproduced by the loudspeaker inversely proportionally to the attenuation.

24. (New) A method for sound-based proximity detection in a mobile telephone having at least a microphone and a loudspeaker operatively connected to signal processing means, the method comprising the steps of:

controlling the signal processing means to activate the loudspeaker to reproduce an acoustic control signal;

determining the attenuation of a control signal transmitted directly to the microphone from the loudspeaker; and

controlling the signal processing means to vary the signal level of an audible signal reproduced by the loudspeaker inversely proportionally to the attenuation.

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